

## Elaine McCluskey

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**From:** finley@fnal.gov  
**Sent:** Thursday, August 05, 2004 7:17 AM  
**To:** David Finley; Bill Foster; Vic Kuchler; Tom Lackowski; Shekhar Mishra; Dixon Bogert; Elaine McCluskey; Ed Crumpley; Weiren Chou; Duane Plant; Chuck Federowicz; Rich Stanek  
**Subject:** 8/4 PD Civil Meeting Notes.

Hi, All:

Here are some notes from the meeting yesterday.

Bill Foster will call the next Proton Driver Civil meeting scheduled for 930AM Wednesday August 11 in the Small Dining Room, since I'll be in an airplane.

The SNS shielding design has 30 feet on top of the linac. The as built configuration may be different, and Elaine McClusky has a phone message in to the SNS civil contact. The SNS linac design is for 1 GeV with a goal of 1 MWatt of beam power, with hopes of reaching 2 MWatt.

The FEL in the TESLA Design Report is 1300 meters long, and the fan is about 90 meters wide for the initial layout. (The fan for the final layout is about twice as wide.) This fits inside the Tevatron footprint which is about 2000 meters across. Two FEL sitings were shown, both of which take 8 GeV electrons from the Linac and bend them more than 90 degrees to enter the FEL. The Linac footprint was shown as 700 meters, and the electron beam travels in the same direction in the Linac as the H-minus beam. The north FEL site uses a 100 meter right bend radius from partway down the 8 GeV beam transfer line, and the FEL ends up about parallel to the Linac. The south site uses a 70 meter left bend radius and ends up at an angle to the Linac. The north site goes through fewer wetlands than the south site. The FEL shown in the TESLA TDR would cost several hundred million dollars if built in the US.

The wetlands mitigation approval took several years for the Main Injector and it might take about the same time for the Linac site inside the Tevatron. On the other hand, it might not take as long since people are more familiar with the process now.

Before the meeting Elaine McClusky pointed out by email that it might be good to get a reading from the Directorate on putting ANYTHING inside the Tevatron footprint, so those concerns could be addressed in a efficient manner and not hold up the December goal for a CD0.

Dave Finley and Chuck Federowicz will meet with Dave Neuffer (at Steve Geer's suggestion) tomorrow concerning a Neutrino Factory layout which will be updated from the original Fermilab Feasibility Study I.

Cheers. Dave.